

**ABSTRACT**

A system and method are described for integrating a fiber optic fixed access network and a fiber optic radio access network. At least one radio unit transmits and receives communications with at least one mobile unit. A first multiplexer transmits and receives the communications with the at least one radio unit and fixed access communications with at least one fixed access subscriber. The first multiplexer is connected to each of the at least one radio unit and to each of the at least one fixed access subscriber using fiber optic connections. Each of the at least one radio unit transmits and receives the communications with the first multiplexer using a wavelength that is different for each of the at least one radio unit and different from that used to transmit and receive the fixed access communications from the at least one fixed access subscriber. The communications and the fixed access communications are transmitted and received together between the first multiplexer and a second multiplexer through the fiber optic fixed access network using the different wavelengths.